WHAT IS CLAIMED IS:

1. A method of preparing for incremental printing of a color image; said method comprising:

receiving or generating data representing a device-color implementation of the image, including respective initial representations of at least black ink and chromatic-color inks; and

applying a substantially direct transform to:

modify quantity of black ink represented in the data, and

recombine the modified quantity of black ink with the initial representations.

2. The method of claim 1, wherein the applying step comprises automatic modification of:

black ink represented in the data, in highlight and midtone regions of the image.

3. The method of claim 1, wherein the applying step comprises automatic modification of:

black ink represented in the data, primarily in highlight and midtone regions of the image, to mitigate graininess in those regions; and

black ink represented in the data, in darker regions of the image, to smoothly blend black-ink quantities in the darker regions with the modified black-ink quantities in the highlight and midtone regions.

4. The method of claim 3, wherein the automatic modification of black comprises establishing:

a black-ink onset point; and

an increasing function of said initial representation of black ink, in regions of an image darker than the onset point.

5. The method of claim 4, wherein the automatic modification of black further comprises:

merging said function into substantially a black-identity function in darkest regions of an image.

6. The method of claim 3, wherein the applying step further comprises automatic modification of:

chromatic-color inks to accommodate the black-ink modifications.

7. The method of claim 6, wherein:

the applying step comprises automatically recombining the modified quantity of black in a way that is inversely proportional to the initial representations of at least the chromatic-color inks.

8. The method of claim 7, wherein:

the automatically recombining comprises finding in a lookup table new quantities of said representations, corresponding to said quantified black-modifying.

9. The method of claim 7, wherein:

final ink representations C′, M′, Y′ and K′ for cyan, magenta, yellow and black respectively are found from the expressions:

$$C' = C + (1 - C)\cdot A_C(K)$$
$$M' = M + (1 - M)\cdot A_M(K)$$
$$Y' = Y + (1 - Y)\cdot A_Y(K)$$
$$K' = A_K(K),$$

where C, M, Y and K are the initial representations of the same colors respectively, and $A_C$, $A_M$, $A_Y$ and $A_K$ are respective preestablished automatic black-replacement functions.

10. The method of claim 2, wherein:

the direct transform application comprises finding in a lookup table new quantities of said representations, corresponding to said quantified black-modifying.

11. The method of claim 1, further comprising the step of:

splitting at least one of the final ink representations to implement the at least one representation in available light and dark colorants.

12. The method of claim 1, wherein:

color initially having no black-ink component is passed through without modification.

13. The method of claim 1, further comprising the step of:

applying the data with recombined black ink in print-masking for hardcopy printing.

14. The method of claim 1, further comprising the steps of:

a human operator's manipulation of a control that selects an amount and a direction of black-ink modification; and

thereafter, substantially automatic operation of said direct transform to effectuate the modifying and recombining parts of the applying step according to the operator's selection.

15. An incremental printing system for forming an image by construction from dots deposited on a printing medium, based upon original image data in device-color space; said system comprising:

a direct device-color to device-color substantially automatic computation module for modifying color image data with no manipulation in terms of perceptual color parameters; and

an output incremental printing stage for printing the image from the modified data.

16. The system of claim 15, wherein the automatic module comprises:

an input for receiving such original image data in the form of initial four-or-more-color separations; and

an output for directing four-or-more-color separations to the output stage.

17. The system of claim 15, wherein the automatic module comprises a computation submodule for establishing:

a black-ink onset point; and

an increasing function of an initial amount of black ink, in regions of an image darker than the onset point.

18. The system of claim 17, wherein the automatic module further comprises:

a computation submodule for merging said function into substantially a black-identity function in darkest regions of an image.

19. An incremental printing method for forming an image by construction from dots deposited on a printing medium, based upon original image data in device-color space; said method comprising the steps of:

a direct device-color to device-color substantially automatic computation to modify color image data with no manipulation in terms of perceptual color parameters; and

then incrementally printing a hardcopy image from the modified data.

20. An incremental-printing image-preparation method, for accommodating personnel who are accustomed to thinking in terms of ink combinations rather than in terms of numerical perceptual color models; said image to be printed based upon an original image data file that substantially expressly represents inking to be used; said method comprising the steps of:

receiving from said personnel an indication of quantity of black ink and other inks desired, in the form of at least four color separations, for use in incremental printing; and

in preparing for incremental printing, directly and automatically implementing changes in represented quantity of black ink, for colors that initially have black ink.

21. The method of claim 20, wherein:

the change-implementing step comprises automatic reduction of black ink represented in the data, primarily in highlight and midtone regions of the image, to mitigate graininess in those regions.

22. An incremental-printing image-preparation method, for accommodating personnel who are accustomed to thinking in terms of ink combinations rather than in terms of numerical perceptual color models; said image to be printed based upon an original image data file that substantially expressly represents inking to be used; said method comprising the steps of:

receiving from said personnel an indication of change in quantity of black ink desired, in incremental printing; and

directly implementing the indicated change, in preparing for incremental printing.

23. The method of claim 22, wherein:

the indication is substantially without reference to any perceptual color model.

24. The method of claim 22:

wherein the implementing step comprises automatic adjustment in quantities of chromatic inks, compensating for the indicated change in quantity of black ink;

wherein said compensating comprises substantially maintaining tonal values in areas of ink change; and

further comprising the step of applying the data file with the implemented change, to printmasking for hardcopy printing.

25. An incremental printing system for forming an image by construction from dots deposited on a printing medium, based upon original image data in device-color space, under control of a user; said system comprising:

a direct device-color to device-color graphical computer interface module for enabling the user to modify color image data in preparation for printing, without requiring the user to directly manipulate perceptual color parameters; and

an output incremental printing stage for printing the image from the modified data.

26. The system of claim 25, wherein the interface comprises controls enabling the user to set substantially directly:

a black-onset point; and

an increasing function of an initial amount of black ink, for black-containing colors darker than the black-onset point.

27. The system of claim 26, wherein:

the interface further comprises controls enabling the user to substantially directly set merging of said function with a black-identity function in darkest regions of the image.